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ABSTRACT

This report presents the findings of an initial survey that was designed to systematically determine the educational needs of citizens with regards to the emergency medical services system in their county. Specifically, the survey sampled the knowledge of respondents concerning: (1) what medical service is; (2) what services are available; (3) how to gain access to the emergency medical system; and (4) the conditions for which emergency medical service is available. Volunteers from county rescue squads conducted 1194 interviews in both the rural and metropolitan areas of Region J in North Carolina; 1036 usable questionnaires resulted. Demographic factors included race, age, sex, area, occupation, and education. The findings are tabulated for each item in the interview questionnaire, and further analyses provide a breakdown of some results by county and by education level. Appendices include both the survey questionnaire used in this study and one used in an earlier Chatham/Orange County study, as well as the computer programs used to obtain a description of the data records, to determine the number of interviews in a particular area, and to reformat the Orange County data to make it comparable to the Region J study. (JD)

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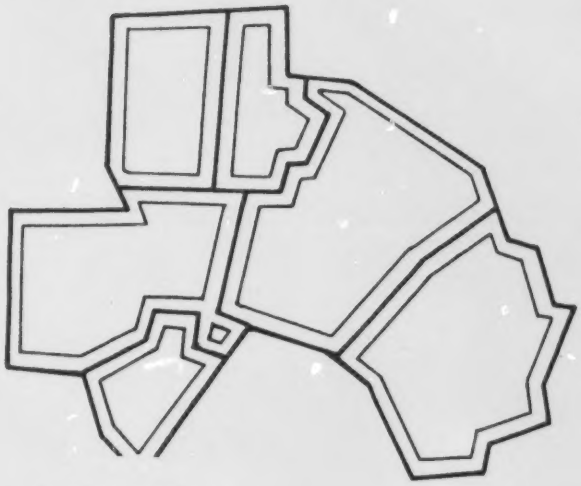

REGION J

Public Education Project

Emergency Medical Services

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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Initial Survey Report

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IR 006 723

INTRODUCTION

As part of a year-long public education project made possible by a grant from the North Carolina Office of Emergency Medical Services to the Region J Council of Governments and administered by the Extension Division of the University of North Carolina at Chapel Hill, a survey of the citizens of Region J was conducted to determine the level of awareness of and information about the Emergency Medical Services System held by the population of the region. The survey was the first part of a project which was designed to systematically determine the educational needs of the population with regards to Emergency Medical Services. After determining these needs, the project was charged with 1) determining the objectives to meet these needs, 2) selecting the educational methods and means which would best meet these objectives and thus satisfy the needs, 3) design and produce materials which would be used in the methods and means previously determined, 4) coordinate and conduct those educational activities which had been decided upon, and finally, 5) conduct a follow-up survey which would serve to evaluate and assess the effect of the project.

The sampling methodology was carefully selected to provide a representative sample of the region in a cost effective manner. This representative sample would then allow for the careful generalization of the survey results to the whole of the population of Region J and thus speak to the needs of the entire area. The results, whereever practical, are reported in terms of percentages to make this generalization simpler for the reader. The following are the results and basic analysis of the original survey.

SURVEY OF EDUCATIONAL NEEDS

Sampling Methodology

In accordance with the revision to the sampling plan of the proposal, a sample size of 1200 for the entire region was chosen. This sample enables us to generalize to the region as a whole but not to specific counties. The process for sampling was based upon the use of census data from the 1970 census. The data is available on magnetic tape at the Triangle Universities Computation Center (TUCC). The program used to obtain a description of the data records is included as Part 1 of Appendix A.

A modified random area sampling procedure was used. Census data is compiled on the basis of Enumeration Districts (EDs) for principally rural areas and on the basis of Block Groups (BGs) for metropolitan areas. In order to obtain as representative a sample as possible, all EDs and BGs were considered in the sample. The number of interviews to be conducted within each of the areas was determined by the proportion of the population of the region that resided in that area. Since the metropolitan areas contain the larger population, the sampling was weighted to give the rural areas more representation. The computer program to determine the number of interviews in a particular area is included as Part 2 of Appendix A. The following was the schema used.

For rural areas:

$$\frac{\text{Population of ED}}{\text{Total Region Population}} \times 800 = \text{Number of interviews in that ED}$$

For metropolitan areas:

$$\frac{\text{Population of BG}}{\text{Total Region Population}} \times 400 = \text{Number of interviews in that BG}$$

It was felt important to obtain a fuller representation from the rural areas of the region in order to ensure an accurate reading about the level of awareness in the entire region. If an emergency situation developed in a rural setting, it would be important that the first person on the scene be able to access the system, whereas in an urban setting, the frequency of persons passing the scene would be much greater and therefore the need for every individual to have the information not as great.

Once the number of interviews for a given area had been determined, census maps showing the boundaries of the Enumeration Districts for the six counties and small cities within each county were obtained from the Institute for Research in the Social Sciences (IRSS) and copied. Maps of the metropolitan areas of Durham and Raleigh were obtained from the U.S. Department of Commerce, 324 W. Market Street, Greensboro, North Carolina, 27402. These metropolitan area maps are marked off into Census Tracts with the Block Groups indicated. The census maps obtained from IRSS were small and therefore difficult to use, so larger versions of the maps (36" by 60") were obtained from Head of Location and Surveys, Map Section, N.C. Department of Transportation, Raleigh, North Carolina, 27611. The boundaries of the EDs were transfered to the larger maps and the areas further divided into quadrants, with each quadrant numbered sequentially from one to four.

To select the starting points for each area, a quadrant was systematically determined by using a sequential progression through the numbered quadrants within each succesive Enumeration

District. For instance, in ED 410, quadrant 1 was chosen; in ED 411, quadrant 2 was chosen; in ED 412, we chose quadrant 3; in 413, we chose quadrant 4; and then we went back to quadrant 1 in Ed 414; and so on. Once the quadrant had been determined, a starting point within it was randomly selected and directions as to how to get to the starting point were written for the interviewers. From this starting point, all interviews for that particular area were done on a door-to-door basis. The same process was followed for the selection of starting points within Block Groups. See Part 3 of Appendix A for a sample starting point direction sheet. The number of surveys for each county is shown in Table 1.

The only deviation from the stated process was in Orange County. Because of an existing project that had already been started in Orange County, data collected from that study were reformatted to conform to the format of the data from the other five counties and weighted down to reflect the proportion of the region that Orange County's population holds. Since the process for sampling used in the Orange County survey was similar, the data obtained is considered comparable. Instead of using EDs in Orange County, townships were used. The interviews were assigned according to relative population size except in the metropolitan area of Chapel Hill-Carrboro, where the interview pool was decreased to ensure representation from the rural areas.

TABLE 1

NUMBER OF INTERVIEWS BY COUNTY

County ID Number	County Name	NUMBER OF INTERVIEWS: Per ED	Per BG	Total ED's and BG's	Actually Completed	Deficient
37	Chatham	83	0	83	58	25
63	Durham	74	167	241	249	- 8
101	Johnston	169	0	169	139	30
105	Lee	83	0	83	83	0
135	Orange	150	0	150	150	0
183	Wake	241	227	468	356	112
		TOTALS:		1194*	1036	159

*The loss of six interviews was due to rounding the number of interviews in each area to the nearest whole number.

Households were randomly selected in the rural areas through a numbering procedure and streets were selected in the metropolitan area of Chapel Hill-Carrboro.[1]

Using Blalock's formula for estimators[2] as follows:

$$P_s \pm \begin{bmatrix} 1.96 \\ 2.54 \end{bmatrix} \sqrt{\frac{P_s \; q_s}{N}}$$

and taking the most conservative proportions, i.e. .50 as both p and q, we have a confidence level at the .05 level of .50 $\pm$ .030 and an interval at the .01 level of .50 $\pm$ .039. This is a conservative estimate giving the greatest variance that could be expected. When the proportions, i.e. p and q, are more widely divergent, the confidence interval becomes smaller. It is also noteworthy that by using a stratified sample, the confidence interval will be reduced even further.

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[1]For a fuller discussion of the Orange County survey, see report entitled "Public Education Survey for Orange County," submitted October 6, 1975 to the Chatham-Orange Joint Emergency Medical Services Committee.

[2]Blalock, Hubert M., Jr. Social Statistics, 2nd edition, New York: McGraw-Hill, 1972.

Interviewer Recruitment and Training

The initial plan for conducting the interviews called for a county coordinator in each county to enlist volunteers from each rescue squad to administer the survey and to call the initial meeting of these volunteers. At this initial meeting, the interviewers were given maps of the county and cities within the county. These maps were marked with red dots to indicate the starting points and arrows to indicate the direction they should proceed. They were also presented with the questionnaires grouped by starting point and an attached sheet giving the starting point location using county road number or street names. At the training sessions, the interviewers were led through the questionnaire step by step to insure that they understood what was required of them and to answer any questions that might arise. Copies of the interviewer instructions are included as Part I to Appendix B. The interviewers were told that a deadline of September 30 existed and were encouraged to do the interviews as soon as possible. The county coordinator would be responsible for collecting the completed questionnaires and maps from the various squads and would make arrangements with the Project Office for returning the completed interviews and the maps.

Because some county coordinators did not function as hoped, the project staff tried to contact other individuals within each county to complete a given portion of the questionnaires. In

several instances, it was discovered that certain rescue squads had not (as late as October 20) yet received the questionnaires for their areas. The interviewers administering these late surveys did not have the benefit of a formal training session.

The problems encountered with this plan seemed to stem from an unrealistic estimate of the amount of time that would be necessary for a county coordinator to spend on the coordination of the interviews within his county. This is exacerbated by the varying number of interviews per county within the region as can be seen from Table 1 and by the great variance among the counties with regard to the EMS organization within the county itself. Whereas some of the coordinators were able to call on an already existing organization to help in conducting the surveys, others were unable to do so, thus requiring the building of a county organization at the same time as conducting the surveys.

The project staff did feel that, for the most part, when the interviews reached the rescue squad level, they were completed well. This indicates that when the follow-up survey is ready to be administered, a realistic estimate of the time necessary for successful completion be provided to the county coordinator. After the prospective coordinator has had time to consider the amount of effort necessary for successful project completion, a decision regarding his willingness to participate will be sought. If this commitment is not possible in all cases, then it will be necessary for the project office to serve the coordinating function. It is envisioned that the Public Education Committee for Region J, as well as the Region Emergency Medical Council, will work towards the establishment of a public education committee in each county. This organization is necessary to ensure that the community groups within the counties

will become involved with the project and that interest will be generated county-wide.

It is possible that the time frame originally projected for the completion of the survey was unrealistic; however, with a better organization on a county level, and coordination among the rescue squads, the time between the training sessions and the actual return of the completed questionnaires could be reduced significantly.

Results of the Data Gathered

A copy of the Region J Survey Instrument is included as Part II of Appendix B and Part III of Appendix B is a copy of the Orange County instrument. A cursory examination of these two instruments will reveal that the information is not in the same format, but most of the information requested on the Region J survey can be obtained from the Orange County survey. The computer program used to reformat the data from the Orange County study to make it comparable to the Region J study is included as Part IV of Appendix A.

Out of 1194 interviews, 1036 are usable questionnaires. This figure takes into consideration the weighting of the 300 Orange County interviews to make them appear as 150, which reflects the correct proportion of the total region. The tabulations of these questionnaires on an item-by-item basis appear in the next section entitled "Survey Measures" and the Statistical Package for the Social Sciences (SPSS) Program for the analysis is included as Appendix C.

Minor uncorrectable differences exist in the coding for various questions between the Region J Survey and the Orange County Survey. Where such differences do exist, a note explaining the differences is included in the "Findings" section of this report.

SURVEY MEASURES

In this study, a preliminary examination of the level of knowledge about and awareness of the Emergency Medical Services System in Region J of North Carolina was made. In keeping with this examination of knowledge and awareness, it is useful to look at certain demographic characteristics to determine if they affect the knowledge and awareness of individuals about EMS. The demographic indicators were as follows.

Race

The categories used were (1) White; (2) Black; (3) Other; (0) Missing responses.

In all cases, a zero code (0) will indicate the number of usable questionnaires which had no response for this particular item. The percentages given for the missing responses were excluded when computing the other percentages.

Results:	This Study	Overall N.C.[3]
White	76.1%	76.8%
Black	23.5%	23. %
Other	.4%	
Missing	.6%	

[3]Steahr, Thomas E. North Carolina's Changing Population. Carolina Population Center; Chapel Hill, N.C., 1973.

These figures indicate that the sample used in the survey matched the race variable for the state almost perfectly.

Sex

The categories used were the traditional ones: (1) Male; (2) Female; (0) Missing.

Results:	This Study	Overall N.C.
Male	43.7%	49%
Female	56.3%	51%
Missing	1.6%	

The difference between the survey sample and the whole of North Carolina percentages can be explained by the fact that regardless of the time of the interview, the female member of the household was more likely to be at home than was the male.

Area

The following coding was used: (1) City; (2) Rural-Farm; (3) Rural Non-Farm. The difference between Rural Farm and Rural Non-Farm was based on the principal occupation of the head of the household.

Results:	This Study	Overall N.C.
City	53.6%	45.0%
Rural Farm	17.8%	55%
Rural Non-Farm	28.4%	
Missing	.6%	

The divergence here is basically a result of the population of Region J being more urban than in the state as a whole.

Occupation

(0) Military; (1) Manual Worker; (2) Clerical Worker; (3) White Collar/Professional; (4) Housewife; (5) Unemployed; (6) Retired; (7) Self-employed/Farmer; (8) Other; (9) Blank

Results:	This Study
Military	.5%
Manual Worker	16.8%
Clerical Worker	14.1%
White Collar/ Professional	14.4%
Housewife	25.2%
Unemployed	5.0%
Retired	8.1%
Self-employed/Farmer	6.5%
Other	4.7%
Blank	4.7%

Comparable figures for the state as a whole were not available in a convenient form.

Age

(1) Under 35; (2) 35 through 50; (3) Over 50; (0) Missing

Results:	This Study
Under 35	30.9%
35 through 50	40.9%
Over 50	28.9%
Missing	1.5%

Figures for the state as a whole were not collected in these categories, however, these are very close to the state figures in roughly comparable age groups and show a sampling of each of the age groups.

Education

The coding for education is: (1) Elementary School; (2) Some High School; (3) High School Graduate; (4) Some Higher Education; (5) College Graduate; (0) Missing

Results:	This Study
Elementary	11.6%
Some High School	21.6%
High School Graduate	31.7%
Some Higher Education	16.9%
College Graduate	18.2%
Missing	1.9%

The distribution of educational levels shows a good sampling of all levels.

These, then, are the demographic variables which will be used to look at varying responses on the information questions listed in the next section.

FINDINGS

In this section of the report, a specific look is taken at those questions which sample the knowledge of the respondents concerning: 1.) what emergency medical service is; 2.) what services are available; 3.) how to gain access to the emergency medical system; and 4.) the conditions for which emergency medical service is available. The number of usable questionnaires was 1036 and the results are reported as the percentage of this number giving a particular response to the question listed.

1. Is there a telephone in your home?

Responses:		Adjusted Percentage:
Yes	958	93.0
No	72	7.0
No Response	6	
Total:	1036	100.0

2. How far is the nearest phone that you have access to?

Responses:		Adjusted Percentage:
Less than 1 mile (or have own phone)	948	91.5
1 mile	88	8.4
2 miles	1	0
Total:	1036	100.0 **

3. Have you ever heard about the emergency medical system for your county?

Responses:		Adjusted Percentage:
Yes	500	56.6
No	383	43.4
No Response	154	
Total:	1036 *	100.0

4. Please tell me briefly what the emergency system does.

Transportation

Responses:		Adjusted Percentage:
Mentioned	593	57.1
Did not Mention	444	42.8
Total:	1036 *	100.0 **

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* Because of the weighting of the Orange County data with a factor of .50, the SPSS program rounded each individual response to the nearest whole number. This rounding, then, could make the totals of the individual responses to be either [up to] two more or two less than the 1036 which is the corrected sample size.

** Percentages may not total exactly 100 due to the rounding of responses to three significant digits.

Telecommunications

Responses:		Adjusted Percentage:
Mentioned	106	10.2
Did not Mention	930	89.8
Total:	1036	100.0

Trained Nurses and Physicians at Hospital

Responses:		Adjusted Percentage:
Mentioned	151	14.6
Did not Mention	885	85.4
Total:	1036	100.0

Trained Emergency Medical Technicians

Responses:		Adjusted Percentage:
Mentioned	213	20.6
Did not Mention	823	79.4
Total:	1036	100.0

Emergency Room at Hospital

Responses:		Adjusted Percentage:
Mentioned	262	25.3
Did not Mention	774	74.7
Total:	1036	100.0

5. Who provides emergency medical service to your community?

Responses:		Adjusted Percentage:
Any rescue squad	548	52.9
Any hospital	87	8.3
Other	78	7.5
Don't know	219	21.1
No response	105	10.1
Total:	1036 *	100.0**

6. What is the name of the hospital with an emergency room closest to your home?

Responses:		Adjusted Percentage:
No response (missing)	8	0.7
Don't know	31	3.0
Lee County Hosp.	86	8.3
NCMH	112	10.8
Watts	148	14.2
Duke	95	9.1
Chatham Hosp. Inc.	40	3.8
Lincoln Hosp.	48	4.6
Rex Hosp.	159	15.3
Wake Memorial	119	11.5
Mary Elizabeth	1	0.1
Fuquay-Varina	9	0.9
Southern Wake	7	0.7
Apex Hosp.	11	1.1
Eastern Wake	6	0.6
Wake Med. Ctr.	19	1.8
Zebulon-Wendell	6	0.6
Wake Forest	2	0.2
Smithfield	12	1.2
Johnston Memorial	91	8.8
Wilson Hosp.	2	0.2
VA Durham	1	0.1
Wayne Hosp.	5	0.5
Total:	1036	100.0

7. How far is it from your home?

Responses:		Adjusted Percentage:
Less than 5 miles	420	41.4
5 - 10 miles	273	26.8
10 or more miles	281	27.6
Don't know	42	4.1
No response	21	____
Total:	1036*	100.0**

8. Who would you call in case of a medical emergency?

Responses:		Adjusted Percentage:
Rescue Squad	484	53.6
Private Physician	171	18.9
Police Department	69	7.7
Hospital	57	6.3
Family or Friends	57	6.3
Don't know or other	65	7.2
No response	135	____
Total:	1036*	100.0

9. What is the telephone number you would call to get trained Emergency Medical Service?

For this question, the interviewer was asked to write down the phone number that the respondent gave to him. This produced a vast array of numbers as responses to this question. In order to make the responses more meaningful, the following recoding was done. If the number was the correct one for EMS (as established by the providers and the Region J Council and Coordinator), it was coded as one (1). The original Orange County survey did not record the actual phone numbers and therefore in order to differentiate

responses a code of two (2) was given to all the Orange County respondents. Respondents who said they did not know the number were given a code of three (3). Those respondents who gave a number that was not one of the recognized emergency numbers were considered as wrong numbers and given a code of four (4). Those respondents who did not answer this question were given a code of zero (0).

This same coding procedure was used in analyzing the next question which concerned whether or not the respondent kept the number posted near the phone and if so, what was the number. This procedure was also used in analyzing the respondents' answers to the request that, if they had not given the emergency phone number on either of the preceding questions, they look it up in the phone book and repeat it to the interviewer.

In answer to question 9 then, involving whether or not the respondent knew the Emergency Medical Services phone number, the following table shows the results:

Responses:		Adjusted Percentage:
Correct Number	203	20.9
Orange Co.	150	15.5
Don't know	538	55.5
Wrong number	79	8.1
No response	66	
Total:	1036	100.0

These percentages are adjusted by taking out the missing responses before computing the responses. It is worthwhile to note here that over half of the respondents said that they didn't know the number

and only about 1/5 knew the correct number.

10. Do you keep the telephone number for Emergency Medical Service in a prominent place on or near your telephone?

Responses:		Adjusted Percentage:
Yes	520	50.2
No	317	30.6
No response	199	19.2
Total:	1036	100.0

Where is the number kept?

Responses:		Adjusted Percentage:
On Pad	10	1.0
By the Phone table	149	14.4
In Phone Book	153	14.8
Phone Sticker	184	17.8
On Calendar	2	0.2
On Wall	12	1.2
In Memory	7	0.7
Other	10	1.0
Wallet or Purse	1	0.1
No response	508	49.0
Total:	1036	100.0

Please tell me what the number is.

Responses:		Adjusted Percentage:
Correct Number	241	23.3
Wrong Number	101	9.7
Did not have # next to phone	694	67.0
Total:	1036	100.0

11. Would you please look in your telephone directory and find the number to call for emergency medical service and tell me what it is.

Responses:		Adjusted Percentage:
Correct Number	208	20.1
Don't Know	143	13.8
Wrong Number	182	17.6
No response	503	48.6
Total:	1036	100.0 **

It is clear from the foregoing three tables that the access number for the Emergency Medical Services System is not available for a variety of reasons to most of the citizens of Region J and therefore will become one of the priority objectives for the project.

12. Does everyone in your home, including any children over age 6, know how to call for emergency medical service?

Responses:		Adjusted Percentage:
Yes	686	68.7
No	220	22.0
Don't Know	94	9.4
No response	38	
Total:	1036*	100.0**

13. How long do you think it would take an emergency medical team to get to your home if you called them?

Responses:		Adjusted Percentage:
5 minutes or less	383	41.8
6 to 10 minutes	282	30.9
11 to 25 minutes	216	23.6
30 minutes or more	34	3.7
No response	123	
Total:	1036*	100.0

14. Have you and your family discussed what to do in case of a medical emergency?

Responses:		Adjusted Percentage:
Yes	395	47.6
No	434	52.4
No response	207	
Total:	1036	100.0

15. Under what conditions would you take someone to the hospital emergency room yourself?

Responses:		Adjusted Percentage:
When injury not severe, patient able to get in car	505	56.9
If injury too serious to wait	142	16.0
If can't get to phone or phone busy	33	3.7
Other or Don't know	207	23.4
No response	150	
Total:	1036 *	100.0

16. If you were to call for emergency medical service, what information do you think you should give to whomever answered the telephone?

Name of Person Calling

Responses:		Adjusted Percentage:
Did not Mention	534	51.5
Mentioned	502	48.5
Total:	1036	100.0

Telephone Number You Are At

Responses:		Adjusted Percentage:
Did Not Mention	896	86.4
Mentioned	141	13.6
Total:	1036*	100.0

Nature of Emergency

Responses:		Adjusted Percentage:
Did Not Mention	319	30.5
Mentioned	719	69.4
Total:	1036*	100.0

Site of Emergency

Responses:		Adjusted Percentage:
Did Not Mention	551	53.2
Mentioned	485	46.8
Total:	1036	100.0

Directions to the Site

Responses:		Adjusted Percentage:
Did Not Mention	491	47.3
Mentioned	546	52.7
Total:	1036*	100.0

Number of Injured and Condition

Responses:		Adjusted Percentage:
Did Not Mention	754	72.6
Mentioned	283	27.3
Total:	1036*	100.0 **

Any Special Circumstances that might constitute danger to the service provider or delay in response time

Responses:		Adjusted Percentage:
Did Not Mention	915	88.2
Mentioned	122	11.8
Total:	1036*	100.0

Don't Know

44 respondents said they did not know what to tell the dispatcher, constituting 4.2% of the sample.

17. If I were coming from (fill in with location of base), please tell me how to get to your home. (Determine if directions are clear)

Responses:		Adjusted Percentage:
Clear	844	87.6
Unclear	115	11.9
No response	78	0.5
Total:	1036*	100.0

18. Is there a charge for Emergency Medical Service in your community?

Since the answer to this question varies by county within the region, and even in some cases, within the county, a tabulation by county is the only meaningful division that can be made on this question. The following table is a breakdown by county.

County	%Yes it costs	%No Cost	%Don't Know
Chatham	57.4	25.9	16.7
Durham	53.5	6.6	39.9
Johnston	4.6	76.2	19.2
Lee	94.0	0.0	6.0
Orange	17.8	46.3	35.9
Wake	32.4	28.2	39.4

The most interesting aspect of this question is the proportion of the individuals answering the question who don't know whether or not EMS costs them anything. It seems that this is an area which should have some emphasis on a local level.

19. What do you think an emergency medical situation is?

Responses:		Adjusted Percentage:
which describe life-threatening situations	695	67.3
which describe non-life-threatening situations	29	2.8
left blank or don't know	293	28.3
misunderstood question	19	1.8
Total:	1036	100.0**

20. Suppose someone you did not know came to your home and told you that an ambulance was needed. What would you do?

Responses:		Adjusted Percentage:
Call for them	602	66.5
Let them into house to call	112	12.4
Depends on appearance and other things	134	14.8
Other	57	6.3
No response	132	
Total:	1036*	100.0

21. What do you see as the greatest emergency medical need in your community?

More emergency equipment and money

Responses:		Adjusted Percentage:
Did not mention	588	56.8
Mentioned	381	36.8
Total:	969***	93.6***

Closer hospitals and more doctors

Responses:		Adjusted Percentage:
Did not mention	715	69.1
Mentioned	321	30.9
Total:	1036	100.0

More and/or better trained emergency personnel

Responses:		Adjusted Percentage:
Did not mention	804	77.7
Mentioned	232	22.3
Total:	1036	100.0

Better Publicity and education

Responses:		Adjusted Percentage:
Did not mention	876	84.5
Mentioned	160	15.5
Total:	1036	100.0

Already adequate

Responses:		Adjusted Percentage:
Did not mention	883	85.2
Mentioned	153	14.7
Total:	1036	100.0

*** Disparity between total responses to this question and total number of usable questionnaires is due to irreconcilable differences in the data collected in the Orange County survey and the data collected in the remainder of Region J.

FURTHER ANALYSES

Additional analysis of the data was conducted by checking for differences in levels of awareness and knowledge of the EMS system by whether or not the household had a telephone and by the demographic indicators of county, race, sex, area, occupation, age, and level of education. The following is a discussion of the more relevant of those crosstabulations.

Have you ever heard about the emergency medical system for your county?

As could be expected, in response to the above question, those households which had a telephone were more likely to have heard of the EMS system: 58.3% with phones had heard as opposed to 35.7% without phones who had heard about the EMS system. Correspondingly, the percentages of households without phones who had not heard about EMS was higher (64.3%) than those with phones who had not heard about EMS (41.7%). It is important to keep in mind here that nearly half of the individuals sampled had not heard about the Emergency Medical Services system for their county.

In response to the same question, the responses broken down by county differ considerably. The following table shows the difference.

County	Have Heard %	Have Not Heard %
Chatham	44.4	55.6
Durham	44.4	55.6
Johnston	71.7	28.3
Lee	97.9	2.1
Orange	64.5	35.5
Wake	50.3	49.7

In this particular instance, the divergently high percentage in Lee County could be the result of several factors. One explanation is that the small number of interviews in Lee County (5.4% of the total) yielded an uncharacteristic result, although this seems unlikely because of the success of the sampling methodology in the other areas. It could be that the population of Lee County, because of the small size of the area, had actually heard of the EMS System in such a great percentage. Or additionally, there is the possibility that the question was misunderstood, giving these divergent results. Regardless of the explanation, when the results of the Lee County questionnaires are pooled with the remaining areas, and the high score on the "yes" answer pooled with the remaining data, this divergence is minimized.

Race produced differing results: 61.7% of the whites had heard about the system in their county as contrasted with 40.4% of the blacks. The "other" category had only 1/2 of 1% of the total responses and therefore was disregarded in this report.

Sex seemingly had no effect on this question with 58.3% of the males answering yes and 54.8% of the females answering that they had heard about the system.

The area in which a person lived seemed to have some effect on whether or not the respondent had heard about the Emergency Medical Services System but the difference between the groups was not significant. Rural farm households had the highest percentage, 61.7%, of the people who had heard of the system. Next came the rural non-farm group with 56.4% who had heard about the system and finally, the city dwellers were the lowest with 54.7% reporting they had heard about the system.

Occupation showed no significant difference on this variable, however, there was a tendency for individuals in white collar occupations and those who considered themselves retired to have heard about the system more often than those in other occupations.

The variations across the age catagories were not significantly different. 58.5% of the people ages 35-50 had heard about EMS; 56.0% of the people over age 50 had heard; and 55.2% of those under 35 years of age indicated that they had heard about the EMS System for their county.

Education did prove to be an important variable, as the following table indicates.

Education Level	% Who Have Heard	% Who Have Not Heard
Elementary School	42.2	57.8
Some High School	45.3	54.7
High School Graduate	63.5	36.5
Some Higher Education	67.8	32.2
College Graduate	58.0	42.0

With an increase in education, there is a steady increase in the number of individuals who say they have heard about the Emergency Medical Services System for their county up until the point when the individual was a college graduate, and then a small decline is noted. This decline can be explained by the relatively transient nature of the college educated within the region and, additionally, by the fact that the graduate students (for example) at the colleges and universities within the region come from all over the state and country and have not had time or the inclination to find out fully about the community in which they are going to school.

Have you and your family discussed what to do in case of a medical emergency?

In answer to the above question, the presence of a telephone in the household had a very strong bearing upon the response. 49.2% of those with phones had discussed with their families what to do in an emergency as opposed to 28.1% of those without phones who had had similar discussions. Overall, less than half (47.8%) of those interviewed had discussed with their families what to do in an emergency. This question was not asked in Orange County on their initial survey and therefore the Orange County responses were shown as missing responses on this question.

The breakdown of responses to this question by county is shown in the following table.

County	Have Discussed %	Have Not Discussed %
Chatham	47.4	52.6
Durham	50.4	49.6
Johnston	37.8	62.2
Lee	65.0	35.0
Orange	----	----
Wake	45.3	54.7

It is clear that, for the most part, one family in two had not discussed what to do in case of a medical emergency. In Johnston County, two families in three had not discussed this. Lee County is the only exception with only 1/3 of the families interviewed saying that they had not discussed it.

Race also proved to be a discriminating factor on this variable, as 50.7% of the white families had discussed what to do

as contrasted with 38.3% of the black families.

Sex seemed to make no difference with "yes" answer percentage of 49.9% and 45.1% for male and female respondents respectively.

Area of residence was again not important. 49.7 is the percentage of city dwellers who had discussed emergencies with their families; rural farm dwellers constituted 44.8%; and rural non-farm dwellers had 45.0% of the respondents who had discussed EMS.

Occupation showed a regularity across categories with white collar professions showing 60.7% had discussed with their families and self-employed or farmers showing the low of 37.9%.

Age was not a critical factor on this measure with 44.2% under 35 answering yes; 47.8% ages 35-50 answering yes; and 50.8% over age 50 answering yes.

Education was again a significant factor as the following table shows.

Educational Level	% answering yes	% answering no
Elementary School	33.3	66.7
Some High School	37.8	62.2
High School Graduate	51.4	48.6
Some Higher Education	48.5	51.5
College Graduate	59.4	40.6

Even with this increase in education, it is apparent that, even at a maximum, less than three families in five had discussed what to do in case of a medical emergency.

INFORMATION ABOUT THE EMERGENCY MEDICAL SERVICES SYSTEM

In an effort to get some measure of an individual's awareness about the emergency medical services system, the request "Please tell me briefly what the emergency system does" was made. The five basic elements of an emergency medical system were listed, i.e.,

Transportation
Telecommunications
Trained Nurses and Physicians at Hospital
Trained Emergency Medical Technicians
Emergency Room at Hospital

The interviewer was asked to listen to the respondents reply and circle the numeral following each item that was mentioned. In the data analysis, each respondent was given a one (1) if he mentioned the item or a zero (0) if he failed to mention a particular item. For a measure of how much information an individual had about the Emergency Medical Services System, the scores for each of the five basic elements were added up for each respondent to give a score from 0 (respondent didn't know any of the elements) to 5 (respondent mentioned all of the elements of the EMS system). These scores were then crosstabulated with the demographic variables mentioned earlier. The following figures represent collapsed catagories for easier reading.

29.1% of the telephone owners knew nothing about the system as opposed to 46.5% of the non-telephone owners who knew nothing about the system.

46% of those owning a telephone mentioned one or two of the elements as contrasted to 31.3% of those not owning a telephone who mentioned one or two elements.

24.9% of those owning a telephone knew three or more elements of the system while 22.2% of non-telephone owners knew three or more.

The following table indicates the information breakdown by county.

County	% knowing 0	% knowing 1-2	% knowing 3-5
Chatham	36.2	46.5	17.2
Durham	39.4	47.0	13.6
Johnston	20.1	56.1	23.7
Lee	1.2	65.0	33.8
Orange	15.0	28.0	57.0
Wake	40.4	41.3	18.3

Overall, approximately 1/3 of the families did not have any information on the EMS System, about 1/4 had a great deal of knowledge about the system and the remaining individuals had a little information about the system. Most of this latter category mentioned only one out of the five elements of the system.

Race had an effect on the respondents' answers. 27.3% of the whites did not mention any elements in contrast to blacks, who had no answer in 39.5% of the cases. 45.6% of the whites mentioned one or two elements which is directly comparable with 43.6% for the blacks. However, 27.1% of the whites mentioned three or more items and only 16.9% of the blacks had similar scores. It seems clear then that while race makes little difference in naming one or two elements, in general whites have a higher level of information about Emergency Medical Services and what the system is composed of.

Interestingly enough, sex was not an important factor in this area; male and female responses were not significantly different at any of the levels of knowledge.

The area in which one resides had no significance as a factor. It should be pointed out, however, that in general, the city dwellers were less well informed in the elements than were their rural neighbors.

An individual's occupation seemed to have little effect on the amount of knwledge he possessed about Emergency Medical Services.

Age was also not a critical factor. The age groups were comparable across all knowledge categories.

Education, however, was a significant factor, as the following table shows.

Educational Level	% knowing 0	% knowing 1-2	% knowing 3-5
Elementary School	41.3	42.5	16.2
Some High School	33.0	46.9	20.1
High School Graduate	25.7	47.6	26.7
Some Higher Education	27.1	44.3	28.6
College Graduate	30.8	43.0	26.1

This indicates that the more education attained, the more one knows about the EMS System. It is similar to the question about awareness of an EMS System in that there seems to be a break between some higher education and college graduate, but this can be attributed to the transient nature of respondents in those categories, as mentioned before.

Does everyone in your home, including any children over age 6, know how to call for Emergency Medical Service?

As would be expected, the presence of a telephone in the home was a critical factor for this question. However, while 70.9% of

phone owners answered "yes" to this question, so did 40.4% of the non-phone owners. 20.2% of the phone owners answered "no" as compared to 44.7% of the non-phone owners. Only 9% of the phone owners said that they didn't know as compared to 14.9% of the non-phone owners who answered in this way.

In general, the county of residence was not a significant factor in answering this question.

On the other hand, race was significant. 75.1% of the white respondents answered "yes" while only 48.2% of the black respondents did so. 18.3% of the whites said "no" while 33.3% of the blacks answered "no." 6.6% of the whites said they didn't know the answer to the question while 18.5% of the blacks said they didn't know.

Sex of the respondent was not a critical factor in answering this question and neither was the area of residence.

Employment of the respondent affected the response and, in general, the white collar people showed higher percentages in that they said more times that their families could call.

Age was not shown to be a significant factor.

As with almost all the other variables, education was an important and significant factor when crossed with this question, as the following table shows:

Educational Level	% Knowing How	% Not Knowing How	% Don't Know
Elementary School	47.8	29.2	23.0
Some High School	59.6	28.1	12.3
High School Graduate	72.9	19.7	7.3
Some Higher Education	73.0	21.8	5.2
College Graduate	80.6	14.0	5.4

It is clear from the table that, as the educational level of the respondent increases, the greater the chance that the respondent would indicate that everyone in the family knew how to call for Emergency Medical Services.

IMPLICATIONS FOR PUBLIC EDUCATION IN REGION J

While some of the questions on the survey instrument obtain data which is of secondary importance to the delivery of Emergency Medical Services, it seems clear from the foregoing analysis that three areas emerge as needs to be emphasized in the public education project.

1. Awareness of and information about Emergency Medical Services as a system. While approximately half of the respondents in the survey said they had heard about the Emergency Medical Services System in their communities, it was thought of as primarily a means for transport to the hospital. It is critical then to explain the concept of the entire Emergency Medical care system to the public---starting with the dispatcher who receives the call, to the Emergency Medical Technicians and their rescue vehicle with the two-way communication with the doctors and nurses in the hospital emergency room. It is also important for the project to stress the concept that the citizen is the most important part of the system for he/she is the trigger which will set the team into action.

2. The proper phone number for accessing the system is of paramount importance. Within the region there is a plethora of phone numbers for accessing the system. It is envisioned that these can be pared to a minimum and then disseminated through a variety of media to the public within the region. It will be emphasized that this number should be, at the least, written down and kept near the phone, and ideally, memorized so that it can be called from anywhere. Accessing the system is the step that is necessary to enable the remaining services to be performed.

3. When should the system be put into action? The analysis shows that approximately 2/3 of the respondents felt that the system should be put into action for a life-threatening situation, but the definitions of life-threatening situations often varied considerably. It will then become one of the objectives of the project to clarify in the citizen's mind which types of situations call for emergency medical care and which do not.

These three broad areas, then, are the ones which make-up the objectives for the Public Education Project. It is envisioned that through the development of specific materials designed to satisfy the determined needs, improvement in the public's awareness and information of the Emergency Medical Services System in their area will result.

APPENDIX A

PART 1

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G01	G01001	RECORD TYPE CODE.....	1	1
		* IDENTIFIES RECORD BY * * TYPE OF GEOGRAPHIC * * AREA TO WHICH THE * * RECORD APPLIES: * * 0=STATE * * 1=COUNTY * * 2=MCD OR CCD * * 3=PLACE * * 7=BG * * 8=ED *		
G02	G02001	1970 STATE CODE.....	2	2
		* ASSIGNED TO STATES * * ALPHABETICALLY. SEE * * FIPS PUB 5-1 OR 6-1 * * FOR STATE LISTING. *		
G03	G03001	1970 COUNTY OF TABULATION CODE.....	4	3
		* ASSIGNED TO COUNTIES * * ALPHABETICALLY * * WITHIN STATE. SEE * * FIPS PUB 6-1 FOR * * INDIVIDUAL STATE * * LISTINGS. *		
G04	G04001	CENTRAL COUNTY CODE.....	7	1
		* IDENTIFIES COUNTIES * * CONTAINING CENTRAL * * CITIES OF SMSA'S: * * 0=YES * * 1=NO *		
G05	G05001	MINOR CIVIL DIVISION OR CENSUS COUNTY DIVISION CODE.....	8	3
		* IDENTIFIES TOWNSHIP * * OR EQUIVALENT AREA. * * CODES ASSIGNED * * ALPHABETICALLY * * WITHIN COUNTY. *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G06	G06001	PLACE CODE..... * ASSIGNED TO "PLACES" * * (CENSUS DEFINITION) * * ALPHABETICALLY * * WITHIN STATE. *	11	4
G07	G07001	PLACE DESCRIPTION CODE... * IDENTIFIES PLACE * * BY TYPE: * * 1=CENTRAL CITY OF * * SMSA ONLY * * 2=CENTRAL CITY OF * * URBANIZED AREA ONLY* * 3=CENTRAL CITY OF * * BOTH SMSA AND UA * * 4=OTHER INCORPORATED * * PLACE * * 5=UNINCORPORATED * * PLACE * * 7=NOT A PLACE *	15	1
G08	G08001	SIZE OF PLACE CODE..... * IDENTIFIES PLACE * * BY POPULATION SIZE: * * 00=UNDER 200 * * 01=200-499 * * 02=500-999 * * 03=1,000-1,499 * * 04=1,500-1,999 * * 05=2,000-2,499 * * 06=2,500-4,999 * * 07=5,000-9,999 * * 08=10,000-19,999 * * 09=20,000-24,999 * * 10=25,000-49,999 * * 11=50,000-99,999 * * 12=100,000-249,999 * * 13=250,000-499,999 * * 14=500,000-999,999 * * 15=1,000,000 OR MORE*	16	2

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G09	G09001	STANDARD CONSOLIDATED AREA CODE.....	18	1
		* ALPHABETIC CODE FOR LARGE METROPOLITAN COMPLEXES (NEWLY DEFINED IN 1970): A=NEW YORK/NORTH-EASTERN NEW JERSEY B=CHICAGO/NORTH-WESTERN INDIANA *		
G10	G10001	STANDARD METROPOLITAN STATISTICAL AREA CODE..	19	4
		* ASSIGNED TO SMSA'S ALPHABETICALLY WITHIN THE U.S. SEE FIPS PUB 8 FOR INDIVIDUAL LISTING. *		
G11	G11001	URBANIZED AREA CODE.....	23	4
		* UNIQUELY IDENTIFIES EACH URBANIZED AREA WITHIN THE U.S. (FOR UA IN SMSA, USUALLY CODED SAME AS SMSA). APPEARS ONLY ON BG & ED RECORDS. *		
G12	G12001	TRACTED AREA CODE.....	27	4
		* UNIQUELY IDENTIFIES TRACTED AREAS WITHIN THE U.S. (FOR TA IN SMSA, USUALLY CODED SAME AS SMSA). *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G13	G13001	UNIVERSAL AREA PREFIX CODE.....	31	1
		* IDENTIFIES LEVEL OF UNIVERSAL AREA: 1=COUNTY 2=NEW ENGLAND TOWN 3=CITY 4=CENTRAL BUSINESS DISTRICT *		
G14	G14001	UNIVERSAL AREA CODE.....	32	5
		* ASSIGNED WITHIN THE U.S. TO ALL CENTRAL CITIES OF SMSA'S, SELECTED TOWNS, AND ALL COUNTIES AND CENTRAL BUSINESS DISTRICTS REQUIRING SEPARATE IDENTIFICATION FOR MOBILITY AND PLACE OF WORK TABULATIONS. *		
G15	G15001	STATE ECONOMIC AREA CODE.	37	2
		* A TWO-DIGIT NUMERIC CODE OR ONE-DIGIT ALPHABETIC CODE (RIGHT-JUSTIFIED) ASSIGNED WITHIN STATES TO SINGLE COUNTIES OR GROUPS OF COUNTIES WITH RELATIVELY HOMOGENEOUS ECONOMIC AND SOCIAL CHARACTERISTICS. *		
G16	G16001	ECONOMIC SUB-REGION CODE.	39	3
		* ASSIGNED WITHIN THE U.S. TO HOMOGENEOUS GROUPINGS OF STATE ECONOMIC AREAS. ESR'S FREQUENTLY CROSS STATE LINES. *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G17	G17001	CENTRAL BUSINESS DISTRICT CODE.....	42	1
		* IDENTIFIES TRACTS * * (BY ED'S AND BG'S) * * WITHIN CENTRAL * * BUSINESS DISTRICTS * * OF CITIES OF 100,000 * * OR MORE: * * 0=YES * * 1=NO *		
G18	G18001	AREA NAME.....	43	30
G19	G19001	TRACT CODE - BASIC.....	73	4
		* ASSIGNED TO TRACTS * * WITHIN COUNTIES. * * (DEFINED BY LOCAL * * COMMITTEE). *		
G20	G20001	TRACT CODE - SUFFIX.....	77	2
		* APPLICABLE FOR * * IDENTIFICATION OF * * TWO OR MORE TRACTS * * SPLIT FROM A FORMER * * (1960) TRACT. * * TRACT SUFFIX NUMBERS * * CORRESPOND TO TRACT * * 'DECIMAL PLACES' ON * * CENSUS MAPS. *		
G21	G21001	BLOCK GROUP CODE.....	79	1
		* ASSIGNED TO CONTIG- * * UOUS BLOCKS (WITHIN * * TRACTS) HAVING A * * COMBINED AVERAGE * * POPULATION OF ABOUT * * 1,000 (NEWLY DEFINED * * 197J). EACH BG IS * * IDENTIFIED BY THE * * FIRST DIGIT OF THE * * THREE-DIGIT BLOCK *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
		* NUMBER ON THE CENSUS * * METROPOLITAN MAPS. * * APPLICABLE ONLY FOR * * CENSUS-BY-MAIL AREAS.*		
	G21002	SPLIT BLOCK GROUP.....	80	1
		* AN ASTERISK IN THIS * * FIELD INDICATES A * * BLOCK GROUP (WITHIN * * A TRACT) HAS BEEN * * SPLIT (BY POLITICAL * * OR ADMINISTRATIVE * * BOUNDARIES) INTO TWO * * OR MORE PARTS. EACH * * PART WILL BE TAB- * * ULATED SEPARATELY. *		
G22		ENUMERATION DISTRICT		
	G22001	CODE - BASIC.....	80	4
		* ASSIGNED TO ED'S * * WITHIN COUNTY. *		
G23		ENUMERATION DISTRICT		
	G23001	CODE - SUFFIX.....	84	1
		* AN ALPHABETIC CODE * * IN THIS FIELD IN- * * DICATES AN ED HAS * * BEEN SPLIT (FROM AN * * UNSUFFIXED ED OF THE * * SAME NUMBER). EACH * * PART WILL BE TAB- * * ULATED SEPARATELY. *		
G24	G24001	URBAN - RURAL CODE.....	85	1
		* IDENTIFIES ED'S AND * * BG'S ACCORDING TO * * CLASSIFICATION: * * 0=URBAN * * 1=RURAL * * 2=MIXED * * (SEE 1970 "URBAN" * * DEFINITION). *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G25	G25001	WARD CODE.....	86	2
		* ASSIGNED TO WARDS * * WITHIN CITIES (WHICH * * CONTAIN WARDS) OF * * 3,000 OR MORE * * POPULATION. * * APPEARS ONLY ON ED * * RECORDS. *		
G26	G26001	CONGRESSIONAL DISTRICT CODE.....	88	2
		* IDENTIFIES CONGRESS- * * IONAL DISTRICTS AS * * DESIGNATED BY STATE * * LEGISLATURES AND MAY * * CHANGE AFTER EACH * * CENSUS. *		
G27	G27001	100% HOUSING COUNT.....	90	7
G28	G28001	100% POPULATION COUNT....	97	8
G29	G29001	LONGITUDE DEGREES.....	105	3
		* DEGREES OF LONGITUDE * * OF THE POPULATION * * MIDPOINT FOR THE * * ASSOCIATED ED OR BG. *		
G30	G30001	DECIMAL POINT.....	108	1
G31	G31001	LONGITUDE DECIMAL DIGITS.	109	4
		* DECIMAL EQUIVALENTS * * OF MINUTES AND * * SECONDS OF LONGITUDE. *		

LISTING OF DUALABS DATA DESCRIPTOR FILE
XXXXXXXXXXX FIRST COUNT MEDLIST BY HUGH HUFF

TABLE NUMBER	DATA DESCRIPTOR NUMBER	DESCRIPTION	BEGINNING POSITION	FIELD LENGTH
G32	G32001	LATITUDE DEGREES.....	113	2
		* DEGREES OF LATITUDE * * OF THE POPULATION * * MIDPOINT FOR THE * * ASSOCIATED ED OR BG. *		
G33	G33001	DECIMAL POINT.....	115	1
G34	G34001	LATITUDE DECIMAL DIGITS..	116	4
		* DECIMAL EQUIVALENTS * * OF MINUTES AND * * SECONDS OF LATITUDE. *		
G35	G35001	TRACT CODE - COMPLETE....	73	6
G36	G36001	ENUMERATION DISTRICT CODE - COMPLETE.....	80	5
G37	G37001	AREA NAME - FIRST 16 CHARACTERS.....	43	16
		* NAMES ARE LEFT- * * JUSTIFIED IN NAME * * FIELD. *		
G38	G38001	AREA NAME - LAST 14 CHARACTERS.....	59	14
		* CONTINUATION OF * * NAME FIELD (G37001): * * LEFT-JUSTIFIED. *		

APPENDIX A

PART 2

```
RUN NAME        SAMPLING PROCEDURE FOR PUBLIC EDUCATION PROJECT
DATA LIST       CARD RAPLHS 1 STATE 2-3 COUNTY 4-6 TRACT 27-30
                N1 43-46 (A) N2 47-48 (A) N3 51-54 (A) N4 55-58 (A)
                N5 59-60 (A) N6 63-66 (A) N7 67-70 (A) N8 71-72 (A) BG 79
                ED 82-83      HOUSE 90-96 POP 98-104  LONG 106-112
                LAT 113-119
```

ATA LIST PROVIDES FOR 18 VARIABLES AND 1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF 119 COLUMNS ARE USED O

```
INPUT MEDIUM    DISK
# OF CASES      ESTIMATED 10000
SELECT IF       ((RAPLHS EQ 7                )AND(COUNTY EQ 37 OR COUNTY EQ 63 OR
                COUNTY EQ 101 OR COUNTY EQ 105 OR COUNTY EQ 135 OR
                COUNTY EQ 183))
IF              (ED GT 0) SAMP=800
COMPUTE         INTV=(POP/29861 5)*SAMP
PRINT FORMATS    N1 TO N8      (A)/INTV (7)
LIST CASES      CASES=42/
BREAKDOWN       POP HOUSE INTV BY COUNTY
READ INPUT DATA
```

```
STATISTICAL PACKAGE FOR THE SOCIAL SCIENCES SPSSH - VERSION 5.01          09/07/75        P

                RUN NAME        SAMPLING PROCEDURE FOR PUBLIC EDUCATION PROJECT
                DATA LIST       CARD RAPLHS 1 STATE 2-3 COUNTY 4-6 TRACT 27-30
                                N1 43-46 (A) N2 47-48 (A) N3 51-54 (A) N4 55-58 (A)
                                N5 59-60 (A) N6 63-66 (A) N7 67-70 (A) N8 71-72 (A) BG 79
                                ED 81-83 (A) HOUSE 90-96 POP 98-104  LONG 106-112
                                LAT 113-119

THE DATA LIST PROVIDES FOR  18 VARIABLES AND  1 RECORDS ('CARDS') PER CASE. A MAXIMUM OF  119 COLUMNS

                INPUT MEDIUM    DISK
                # OF CASES      ESTIMATED 20000
                SELECT IF       ((RAPLHS EQ 7                )AND(COUNTY EQ 37 OR COUNTY EQ 63 OR
                                COUNTY EQ 101 OR COUNTY EQ 105 OR COUNTY EQ 135 OR
                                COUNTY EQ 183))
                IF              (BG GT 0) SAMP=400
                IF              (ED GT 0) SAMP=800
                COMPUTE         INTV=(POP/540589)*SAMP
                PRINT FORMATS    N1 TO N8      (A)/INTV (7)
                LIST CASES      CASES=42/
                BREAKDOWN       POP HOUSE INTV BY COUNTY
                READ INPUT DATA
```

APPENDIX A

PART 3

ED 34 Quadrant 3 : 1 interviews 76 Map reference: town (county)

STARTING AT THE INTERSECTION OF Co. Rd. 1001 AND Co. Rd. 1150, GO NW ON 1150, AND INTERVIEW First HOUSES.

County: Lee

ED 35 Quadrant 4 : 1 interviews 66 Map reference: (town) county Sanford

STARTING AT THE INTERSECTION OF Birch St. AND Woodland Ave., GO SW ON Birch St., AND INTERVIEW first HOUSES.

X

County: Lee

ED 32 + 32B Quadrant 1 : 3 interviews 61-63 Map reference: (town) county Sanford

STARTING AT THE INTERSECTION OF Lee Ave AND Main St., GO N ON Lee for 1 block, AND INTERVIEW at the 3rd, 4th, + 5th HOUSES in the 2nd block

County: Lee

ED 33 Quadrant 3 : 1 interviews 64 Map reference: (town) county Sanford

STARTING AT THE INTERSECTION OF Horner Blvd. AND the Seaboard Coast Railway, GO east ON Horner Blvd, AND INTERVIEW 1st HOUSES.

County: Lee

ED 34 Quadrant 4 : 1 interviews 65 Map reference: (town) county Sanford

STARTING AT THE INTERSECTION OF Wood and Ave. AND Hughes St, GO

Y

APPENDIX A

PART 4

PART 4

```
// EXEC SPSS5
//TAPEOUT DD SYSOUT=(B,,1111),DCB=(RECFM=F,LRECL=80)
//SYSIN     DD *                  GENERATED STATEMENT

RUN NAME          CONVERSION OF ORANGE COUNTY DATA TO REGION FORMAT
DATA LIST         CARD NUM 2-4 AGE 7 RACE 8 SEX 9 OCC 10 AREA 12 ED 13 TEL 14
                  HURD 16 INFO 17 WHO 18 WHAT 19 FOR 20 WHC 21 TEL1 22
                  TEL2 23 TEL3 24 CAL 25 FAR 26 LONG 28 CON 27 CALL1 30
                  CALL2 31 CALL3 26 CALL4 57 CALL5 32 CALL6 33 CALL7 34 CALL8 58
                  DIR 35 COST 36 STRANG 37 NEED1 38
INPUT MEDIUM      CARD
# OF CASES        300
RECODE            WHAT (1=5)(2=6)(3=7)(4=8)(5=9)(6=3)(9=0)
COMPUTE           COUNTY=135
WRITE CASES       (2F3.0,1X,7F1.0,F2.0,2F1.0,4X,F1.0,F2.0,2F1.0,5X,2F1.0,15X,2F1.0,
                  F2.0,1X,11F1.0,2X,2F1.0)
                  COUNTY NUM RACE SEX AREA OCC AGE ED TEL FAR HURD INFO WHO WHAT
                  FOR WHC TEL1 TEL2 TEL3 CAL LONG CON CALL1 TO CALL8 DIR COST
                  STRANG NEED1
READ INPUT DATA
```

APPENDIX B

PART 1

REGION J

PUBLIC EDUCATION PROJECT

EMERGENCY MEDICAL SERVICES

SURVEY

The purpose of the survey is to assess the public education needs in Region J relative to the public's knowledge of emergency medical services. Specifically, the objective is to learn to what extent the public has accurate knowledge of the following:

1. What emergency medical service is.
2. What services are available.
3. How to gain access to the emergency medical system.
4. The conditions for emergency medical service, i.e. whether or not recipients of the service must pay for it or be a member of a particular organization.

The survey will provide the data base for the development of the public education program and for its evaluation after completion.

INSTRUCTIONS

In the questionnaire, notes or instructions to interviewers appear in CAPITAL LETTERS. The questions themselves, which interviewers should quote verbatim, appear in regular type—Upper and Lower Case Letters. The coded items or answers appear in *Italics*. Interviewers should circle the coded number or fill in the blanks, but should never read the italicized items to the interviewees.

PUBLIC EDUCATION PROJECT
EMERGENCY MEDICAL SERVICES
UNIVERSITY EXTENSION DIVISION ANNEX
BUILDING 3, CHYDARU, OLD MASON FARM RD.
CHAPEL HILL, NORTH CAROLINA 27514 PHONE: (919) 933-2360

REGION J SURVEY
INSTRUCTIONS TO INTERVIEWERS

We wish, first of all, to thank you for agreeing to administer our questionnaires. In this way, you are helping us to improve the Emergency Medical Services not only in Region J, but in the entire state of North Carolina.

It is very important, in keeping within our one-year time frame for the project, that these interviews be returned to us promptly. But it is also important that they be done correctly. So please give us just a few more minutes of your time now and read the following instructions:

1. Follow the attached small slip of directions to find your starting point. However, if this exact point is undergoing urban renewal or for some other reason no longer exists, stay in the general vicinity, but find another starting point and record it for our information.

2. If no one is home or if the respondent refuses to participate in the survey, or even if he begins it but refuses to continue to finish, go on to another house. Please go to as many houses as is necessary in order to obtain completed questionnaires. It is important that we get back the exact number of interviews noted per starting point.

Try to obtain your responses from an equal number of males and females. For example, if a male answers your questions at one house and if at the next house you have a choice of speaking to a male or a female, choose the female. DO NOT TALK TO BOTH SIMULTANEOUSLY.

3. Please use a pencil to circle the number that corresponds to the way in which the person resonds. Do not let the person read and mark the answers on the form himself and DO NOT PROMPT HIM IN ANY WAY.

4. If you are connected with a rescue squad or an organization that would have a uniform or ensignia, please wear it. This will help give the home residents confidence in the validity of our survey.

5. Lastly, if you have any questions, please call our office COLLECT and we will be glad to answer them.

Again, thank you for aiding us in this project.

APPENDIX B

PART 2

REGION J
PUBLIC EDUCATION PROJECT
EMERGENCY MEDICAL SERVICES

SURVEY

PART I

INTRODUCE YOURSELF

Good evening, my name is_____. I am working as a volunteer with the Region J Emergency Medical Service Council. We are conducting a survey to discover how much is known about emergency medical services in this area.

The results will help the council to improve emergency medical care and for this reason, I would appreciate your help in answering a few questions about emergency medical services.

PART II

OBTAIN BACKGROUND INFORMATION

FOR THE FOLLOWING 4 ITEMS, MARK ITEM FROM YOUR OBSERVATION, DO NOT ASK.

A.	Race:	*White*	1
		Black	2
		Other	3
B.	Sex:	*Male*	1
		Female	2
C.	County:	*Chatham*	1
		Durham	2
		Johnston	3
		Lee	4
		Orange	5
		Wake	6
D.	Area:	*City*	1
		Rural-farm	2
		Rural non-farm	3

E. What is your occupation? (LIST HERE) _____

F. In which age bracket are you? STATE THESE AGE BRACKETS:

Under 35	1
35 thru 50	2
Over 50	3

G. What is the highest level of schooling you have completed?

Elementary	1
Some high school	2
High school graduate	3
Some higher education	4
College graduate	5

PART III: QUESTIONS ABOUT EMERGENCY MEDICAL SERVICES.

1. Is there a telephone in your home?

Yes	1
No	2

IF RESPONDENT ANSWERS NO, ASK:

2. How far is the nearest phone that you have access to? (LIST DISTANCE IN MILES) _____

3. Have you ever heard about the emergency medical system for your county?

Yes	1
No	2

IF RESPONDENT ANSWERS YES, ASK:

4. Please tell me briefly what the emergency system does.

FOLLOWING ARE LISTED THE FIVE BASIC ELEMENTS OF AN EMERGENCY MEDICAL SYSTEM. CIRCLE THE NUMERAL OF THE ITEMS MENTIONED BY THE RESPONDENT. DO NOT PROMPT BY SUGGESTING ITEMS.

Transportation	1
Telecommunications	2
Trained Nurses & Physicians at Hospital	3
Trained Emergency Medical Technicians	4
Emergency Room at Hospital	5

THEN SAY:
Can you think of anything else?

5. Who provides emergency medical service to your community?

Any rescue squad	1
Any hospital	2
Other	3
Don't know	4

6. What is the name of the hospital with an emergency room closest to your home? _____

Don't know	3

7. How far is it from your home? LIST DISTANCE IN MILES

Less than 5 miles	1
5-10 miles	2
10 or more miles	3
Don't know	4

8. Who would you call in case of a medical emergency?

Rescue squad	1
Private physician	2
Police department	3
Hospital	4
Family or friends	5
Don't know or other	6

9. What is the telephone number you would call to get trained Emergency Medical Service? _____

Don't know	3

10. Do you keep the telephone number for Emergency Medical Service in a prominent place on or near your telephone?

Yes	1
No	2

IF YES, ASK:

Where is the number kept? _____

Please tell me what the number is. _____

IF PHONE NUMBER GIVEN IN 9 WAS INCORRECT OR IF 10 WAS ANSWERED NO, THEN ASK:

11. Would you please look in your telephone directory and find the number to call for emergency medical service and tell me what it is. _____

Can't find	3

12. Does everyone in your home, including any children over age 6, know how to call for emergency medical service?

Yes	1
No	2
Don't know	3

13. How long do you think it would take an emergency medical team to get to your home if you called them? _____

14. Have you and your family discussed what to do in case of a medical emergency?

Yes	1
No	2

15. Under what conditions would you take someone to the hospital emergency room yourself?

CIRCLE THE NUMERAL OF THE ITEMS WHICH THE RESPONDENT NAMES, BUT DO NOT PROMPT BY SUGGESTING THESE ITEMS.

When injury not severe, patient able to get into car	1
If injury too serious to wait	2
If can't get to phone or if phone is busy	3
Other or don't know	4

16. If you were to call for emergency medical service, what information do you think you should give to whomever answered the telephone?

CIRCLE THE NUMERAL OF THE ITEMS WHICH THE RESPONDENT NAMES, BUT DO NOT PROMPT BY SUGGESTING ITEMS.

Name of person calling	1
Telephone number you are at	2
Nature of emergency	3
Site of emergency	4
Directions to the site	5
Number of injured and condition	6
Any special circumstances that might constitute danger to the service provider or delay in response time	7
Don't know	8

17. If I were coming from _____ , (FILL IN WITH LOCATION OF PROVIDER'S BASE) please tell me how to get to your home.

DETERMINE IF DIRECTIONS ARE:

Clear	1
Unclear	2

18. Is there a charge for emergency medical service in your community?

Yes	1
No	2
Don't know	3

19. What do you think an emergency medical situation is?

_____

_____

_____

20. Suppose someone you did not know came to your home and told you that an ambulance was needed. What would you do?

CIRCLE THE NUMERAL OF THE ITEM MENTION BY THE RESPONDENT. DO NOT PROMPT BY SUGGESTING ITEMS.

Call for them	1
Let them into house to call	2
Depends on appearance and other things (day or night, alone or with someone)	3
Other	4

21. What do you see as the greatest emergency medical need in your community?

CIRCLE THE NUMERAL OF THE ITEMS MENTIONED BY THE RESPONDENT. DO NOT PROMPT BY SUGGESTING ITEMS.

More emergency equipment and money, i.e., ambulances, rescue vehicles	1
Closer hospitals & more doctors	2
More and/or better trained emergency personnel	3
Better publicity & education	4
Already adequate	5

THANK THE RESPONDENT.

Thank you for your time and help in answering these questions.

APPENDIX B

PART 3

CHATHAM/ORANGE EMERGENCY MEDICAL COUNCIL
PUBLIC EDUCATION
SURVEY INSTRUMENT

Good evening, my name is _____. I am working as a volunteer with the Orange-Chatham Emergency Medical Service Council. As you may have heard, we are conducting a survey to discover how much is known about emergency services in this area.

The results will help the council to improve emergency medical care and for this reason, I would appreciate your help in answering some questions.

The purpose of the survey is to assess the public education needs in Chatham and Orange counties relative to the public's knowledge of emergency medical services. Specifically, the objective is to learn to what extent the public has accurate knowledge of the following:

1. What emergency medical service is.
2. What services are available.
3. How to gain access to the emergency medical system.
4. The conditions for emergency medical service, i.e. whether or not recepients of the service must pay for it or be a member of a particular organization, etc., and how emergency medical systems are financed.

Another objective of the survey is to assess the willingness of the public to assist in emergency medical situations while awaiting the arrival of emergency medical technicians, i.e., the willingness to provide interim emergency care.

The survey will provide the data base for final development of the public education program and for its evaluation after completion.

Do Not Write I.D. Code ___ ___ ___ ___ ___ ___
1 2 3 4 5 6

Age: (1) Lowest Thru 35 (2) 36 Thru 50 (3) 51 Thru Oldest — Col. ●

Race: (1) White (2) Black — Col. 8

Sex: (1) Male (2) Female — Col. 9

Occupation: (List here.) _____ — Col. 10

County: (1) Orange (2) Chatham — Col. 11

Area: (1) City (2) Rural-Farm (3) Rural Non-Farm — Col. 12

Education: (1) Elementary (2) Some High School
(3) High School Grad. (4) Some Higher Education
(5) College Grad. — Col. 13

Now that we have the background information, we will shift to another topic.

1. Is there a telephone in your home?
(1) Yes (2) No — 1. ● Col. 14

2. If you live alone, is there anyone who checks with you daily either by telephone or personal visits?
(1) Yes (2) No — 2. ___ Col. 15

Now we would ask some questions to determine your understanding of emergency medical service and what services are available.

3. Have you ever heard about the emergency medical system for your county?
(1) Yes (2) No — 3. ___ Col. 16

4. If yes, please tell me briefly what the emergency medical system is and does? (A person who understands the nature of the emergency medical system should know that it involves the six basic essential elements.)

(1) Transportation
(2) Trained Emergency Medical Technicians
(3) Telecommunications
(4) Emergency Room at Hospital
(5) Trained Nurses and Physicians at Hospital

(1) Yes (2) Little Knowledge (3) No Knowledge — 4. ● Col. 17

5. Who provides emergency medical service to your community?

_____ (4) Don't Know

5. _____ Col. 18

6. What is the name of the hospital with an emergency room closest to your home?

_____ (4) Don't Know

6. _____ Col. 19

7. How far is this hospital from your home? _____
(4) Don't Know

7. _____ Col. 20

We would now like to ask some questions concerning access to the emergency medical system.

8. Who would you call in case of a medical emergency?

_____ (4) Don't Know

8. _____ Col. 21

9. Do you know the telephone number to call in order to get trained emergency medical service?
(1) Yes (2) No

(If yes) Please give me the telephone number you would call. _____

9. _____ Col. 22

10. Do you keep the telephone number for emergency medical service written down somewhere?
(1) Yes (2) No Where_____

10. _____ Col. 23

11. If No to 9 and 10 could you find the number to call for emergency medical service from the telephone directory and give it to me? _____(Number)

11. _____ Col. 24

12. Does everyone in your home, including children, know how to call for emergency medical service.
(1) Yes (2) No (3) Don't Know

12. _____ Col. 25

13. Is there a telephone near your home which you can use to make emergency calls?
(1) Yes (2) No

13. _____ Col. 26

14. When would you take someone to the hospital yourself instead of calling an ambulance? _____
_____
_____.

14. _____ Col. 27

15. How long do you think it would take an emergency medical team to get to your home if you called them? _____
_____
_____

15. _____ Col. 28

16. If you were to call for emergency medical service, what information do you think whom ever answered the telephone would need to know? (Interviewer should check items.)

16. ____ Col. 29

(1) Nature of the emergency

(2) Name of person calling — Col. 30

(3) Telephone number from which call is made — Col. 31

(4) Site of the emergency and directions to the site — Col. 32

(5) Number of injured persons and their condition — Col. 33

(6) Any special circumstances that might constitute danger to the service provider or delay the response time. — Col. 34

17. Could you give an ambulance directions to your home that would be easy to understand?
(1) Yes (2) No (3) Don't Know

17. ____ Col. 35

We would like to know something about your understanding of the operating conditions of emergency medical service.

18. Is there a charge for emergency medical service in your community?
(1) Yes (2) No (3) Don't Know

18. ____ Col. 36

19. Do you think the charges made for emergency medical service, if any, cover the full cost of the service?
(1) Yes (2) No (3) Don't Know

19. ____ Col. 37

20. If no, how do you think the costs for such services are paid? _____

20. ____ Col. 38

21. What do you think is needed most in order to provide adequate emergency medical service in your community?
_____

21. ____ Col. 39

Now for the last part of this questionnaire, we would like to ask a few questions about first-aid.

22. Are there first-aid supplies in your home?
(1) Yes (2) No (3) A few items

22. ____ Col. 40

23. Have you had any emergency medical training?
(1) Yes (2) No

23. ____ Col. 41

24. Would you be willing to take some training in emergency medical procedures?
(1) Yes (2) No

24. ____ Col. 42

25. Is there a person in your community who is trained in emergency medical care? 25. _____ Col. 43
(1) Yes (2) No (3) I Don't Know

26. Have you ever been involved in an emergency situation in which you administered or received first-aid? 26. _____ Col. 44
(1) Yes (2) No

27. If there is no danger of the car catching fire, would you attempt to remove an automobile accident victim from the car? 27. _____ Col. 45
(1) Yes (2) No

28. Have you ever aided in the delivery of a baby? 28. _____ Col. 46
(1) Yes (2) No

29. Can you administer artifical respiration? 29. _____ Col. 47
(1) Yes (2) No

30. Do you know the difference between the three degrees of burns? 30. _____ Col. 48
(1) Yes (2) No

31. Would the appearance of an unconscious person (for instance, the skin color) give you a clue to his condition? 31. _____ Col. 49
(1) Yes (2) No (3) I Don't Know

32. Would you attempt to treat a third-degree burn (for instance, with ointment or cold wet compresses, etc.)? 32. _____ Col. 50
(1) Yes (2) No (3) I Don't Know

33. Which would you attempt first with a drowning victim, getting air into the lungs or removing water from the lungs? 33. _____ Col. 51
(1) Getting air into the lungs
(2) Removing water from the lungs
(3) Neither
(4) I Don't Know

34. Can you tell if a person may have suffered a heart attack? 34. _____ Col. 52
(1) Yes (2) No (3) I Don't Know

35. Do you know how to control excessive bleeding? 35. _____ Col. 53
(1) Yes (2) No

36. If a corrosive acid (cleaning solutions, disinfectant, etc.) has been swallowed, would you induce vomiting? 36. _____ Col. 54
(1) Yes (2) No (3) I Don't Know

37. What would you do if a stranger came to your home and asked to use the telephone in order to call for an ambulance? 37. _____ Col. 55
_____
_____
_____

38. What do you see as the greatest emergency medical need in your community?_____

_____

_____

38. _____
Col. 56